

Appl. No. 10/719,738
Reply to Final Official Action of March 28, 2007

REMARKS

Claims 1-20 are pending in this application. Claims 5, 11 and 18 are allowed. Claims 1, 8 and 11 are amended. Claims 21 and 22 are newly added. Reconsideration of this application and allowance of each of Claims 1-4, 6-10, 12-17 and 19-21 are respectfully requested.

Applicants take this opportunity to thank Examiner Pervan for the opportunity given their undersigned counsel to discuss aspects of the invention in a telephonic Examiner Interview that took place on May 8, 2007.

Acknowledgment for allowed Claims 5, 11 and 18

Applicants are grateful to the Examiner for acknowledging the allowance of Claims 5, 11 and 18.

Claim rejections under 35 U.S.C. §103(a)

The Action rejects Claims 1-4, 6-10, 12-17 and 19-20 under 35 U.S.C. §103(a) for allegedly being obvious over U.S. Patent No. 6,552,735 to Dehmlow ("Dehmlow") in view of U.S. Patent Application No. 2005/0052394 to Waterman ("Waterman").

Claim 1 has been amended to recite "... the primary and secondary sub-frames are displayed sequentially at a second frequency and combined to produce a single image so that the separation of the two sub-frames is not detectable by a viewer." (Emphasis added). Claim 1 is not obvious over the combined teachings of Dehmlow and Waterman for reasons set forth below.

As conceded by the Action, Dehmlow fails to disclose that the primary and secondary sub-frames are displayed sequentially at a second frequency so that the separation of the two sub-frames is not detectable by a viewer.

Dehmlow discloses a method for eliminating latent images on display devices in which the maximum luminance of each independent emitter is adjusted so that the maximum luminance of all of the independent emitters is **substantially the same** as the maximum luminance of the independent emitter that has experienced the most decay. (Col. 1, Lines 53-65). In Step 32 of FIG. 2, Dehmlow samples **an image** including signals 24 or 26 that represent the brightness,

Appl. No. 10/719,738

Reply to Final Official Action of March 28, 2007

on/off status, or other status of each pixel. (Col. 2, Lines 54-58). (During the interview, Examiner Pervan referred to the sampled image as the primary sub-frame recited in Claim 1). Dehmlow then uses controller 18 to accumulate a history H of the status of each pixel of the **sampled image** and stores history H in memory 16 in Step 34. (Col. 2, Lines 58-60). Then Dehmlow estimates the luminance decay of each pixel in Step 36. (Col. 2, Lines 60-63). Dehmlow in Step 38 determines the lowest luminance value. (Col. 2, Line 66 to Col. 3, Line 3). In Steps 40 and 42, Dehmlow corrects luminance of each pixel so as to **equalize** the maximum luminance of more and less aged pixels by decreasing the maximum luminance of infrequently-used pixels to **match** the maximum luminance of frequently-used pixels. (Col. 3, Lines 3-8). By continuously adjusting the image by equalizing the luminance of frequently-used and infrequently-used pixels, a **final image** is displayed to a viewer, such that the effects of differential aging are rendered invisible. (Col. 3, Lines 8-10). (In the interview, Examiner Pervan referred to the final image as the secondary sub-frame recited in Claim 1).

Indeed, Dehmlow's sampled image is a defective image. Dehmlow merely samples the image for collecting status of pixels. Based on the collected data, Dehmlow merely adjusts brightness of pixels and displays the final image with adjusted brightness. The final image in Dehmlow represents a single image that is displayed and which represents a correction to the sampled image. Dehmlow DOES NOT combine the original sampled image and another image to produce a single image that is displayed. Accordingly, Dehmlow fails to teach or suggest that the primary and secondary sub-frames are combined to produce a single image.

During the interview, Examiner conceded that Waterman was merely cited to show the primary and secondary sub-frames are displayed sequentially at a second frequency.

Further, Waterman is directed to a method for a **liquid crystal microdisplay**. Waterman merely discloses displaying a first video information at a first voltage polarity and a **second video information at a second voltage polarity opposite to the first voltage polarity** such that a LCD display driver circuit will output two frames of video information during the same time period to the liquid crystal microdisplay thereby **operating at twice the speed**. (Paragraphs [0028] and [0035]-[0036]). Waterman indicates that the first and second video information differ **ONLY** by polarity and not intensity. Nothing in Waterman's description or drawings

Appl. No. 10/719,738
Reply to Final Official Action of March 28, 2007

shows that a primary sub-frame and a secondary sub-frame are combined to produce a single image. Waterman therefore fails to cure the above-indicated deficiency of Dehmlow.

Based on the foregoing, Dehmlow and Waterman fail to teach or suggest that the primary and secondary sub-frames are combined to produce a single image. Thus, a prima facie case of obviousness has not been established, and amended Claim 1 thus would not have been obvious over the combined teachings of Dehmlow and Waterman. Withdrawal of the rejection to Claim 1 is respectfully requested and Claim 1 is therefore allowable.

Claims 2-4, 6 and 7 depend from Claim 1 and are therefore distinguished over the art of record by virtue of their dependencies. Withdrawal of the rejections of Claims 2-4, 6 and 7 is respectfully requested.

Claim 8 is amended to recite "... the primary and secondary sub-frames are displayed sequentially at a second frequency and combined to produce a single image" (Emphasis added).

Like Claim 1, Claim 8 is not obvious over the combined teachings of Dehmlow and Waterman. Withdrawal of the rejection of Claim 8 is respectfully requested.

Claims 9, 10 and 12-14 depend from Claim 8. Claims 9, 10 and 12-14 are also not obvious over the art of record by virtue of their dependencies. Withdrawal of the rejections of these claims is respectfully requested.

Claim 15 is amended to recite "... means for displaying a primary sub-frame and at least one secondary sub-frame sequentially at a second frequency so as to combine the primary and secondary sub-frames to produce a single image" (Emphasis added). For reasons similar to those set forth above in connection with Claim 1, Claim 15 is not obvious over the combined teachings of Dehmlow and Waterman. Withdrawal of the rejections to Claim 15 is respectfully requested.

Claims 16, 17, 19 and 20 depend from Claim 15. Claims 16, 17, 19 and 20 are distinguished from the combined art of record by virtue of their dependencies. Withdrawal of the rejections of these claims is respectfully requested.

Appl. No. 10/719,738
Reply to Final Official Action of March 28, 2007

Based on the foregoing, reconsideration and withdrawal of the 103(a) rejections of Claims 1-4, 6-10, 12-17, 19 and 20 are respectfully requested.

New Claims 21 and 22

Claims 21 and 22 are newly added to add further distinguishing features related to the primary sub-frame and the secondary sub-frame including different brightnesses. In particular, Claim 21 recites that the primary sub-frame comprises one or more predetermined non-stressed pixels, the predetermined stressed pixels have a first level of brightness and the predetermined non-stressed pixels have a second level of brightness, wherein the first level is greater than the second level. Since Claims 21 and 22 each depend from Claim 1, Claims 21 and 22 are distinguished from the art of record by virtue of their dependencies.

Appl. No. 10/719,738
Reply to Final Official Action of March 28, 2007

Conclusion

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. Early notification to that effect is respectfully requested.

The Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account 04-1679.

Respectfully submitted,

Dated: 5-24-2007


Mark J. Marcelli, Reg. No. 36,593
Attorney for Applicants

DUANE MORRIS LLP
101 West Broadway, Suite 900
San Diego, CA 92101
Telephone: (619) 744-2200
Facsimile: (619) 744-2201